

Form PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 032026:0777	SERIAL NO. 10/ 800,923
INFORMATION DISCLOSURE CITATION Submitted: March 15, 2004 <i>(Use several sheets if necessary)</i>		APPLICANT Paul F. Nealey, et al.	
		FILING DATE	GROUP ART UNIT 1756

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS								
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
PND		T.A. Savas, et al., "Achromatic Interferometric Lithography for 100-nm-Period Gratings and Grids," J. Vac. Sci. Technol. B, Vol. 13, No. 6, Nov./Dec., 1995, pp. 2732-2735.
PND		T.A. Savas, et al., "Large-Area Achromatic Interferometric Lithography for 100 nm Period Gratings and Grids," J. Vac. Sci. Technol. B, Vol. 14, No. 6, Nov./Dec., 1996, pp. 4167-4170.
PND		P. Mansky, et al., "Ordered Diblock Copolymer Films on Random Copolymer Brushes," Macromolecules, Vol. 30, 1997, pp. 6810-6813.
PND		Xiaolan Chen, et al., "Interferometric Lithography of Sub-Micrometer Sparse Hole Arrays for Field-Emission Display Applications," J. Vac. Sci. Technol. B, Vol. 14, No. 5, Sep./Oct., 1996, pp. 3339-3349.
PND		Miri Park, et al., "Block Copolymer Lithography: Periodic Arrays of ~1011 Holes in 1 Square Centimeter," Science, Vol. 276, No. 5317, 30 May 1997, pp. 1401-1404.

EXAMINER <i>Stephen Charles Davis</i>	DATE CONSIDERED 09/23/04
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* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

Form PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 032026-0777	SERIAL NO. 10/800923
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
DED		Hideaki Yokoyama, et al., "Structure and Diffusion of Asymmetric Diblock Copolymers in Thin Films: A Dynamic Secondary Ion Mass Spectrometry Study," Macromolecules, Vol. 31, 1998, published on web 11/20/98, pp. 8826-8830.	
DED		Wieland Schöllkopf, et al., "A Cluster Size Nanofilter with Variable Openings Between 2 and 50 nm," J. of Chemical Physics, Vol. 109, No. 21, 1 December 1998, pp. 9252-9257.	
DED		J.A. Hoffnagle, et al., "Liquid Immersion Deep-Ultraviolet Interferometric Lithography," J. Vac. Sci. Technol. B, Vol. 17, No. 6, Nov./Dec., 1999, pp. 3306-3309.	
DED		Christopher Harrison, et al., "Reducing Substrate Pinning of Block Copolymer Microdomains with a Buffer Layer of Polymer Brushes," Micromolecules, Vol. 33, 2000, published on web 12/28/99, pp. 857-865.	
DED		Rob G.H. Lammertink, et al., "Nanostructured Thin Films of Organic-Organometallic Block Copolymers: One-Step Lithography with Poly(ferrocenylsilanes) by Reactive Ion Etching," Advanced Materials, Vol. 12, No. 2, 2000, pp. 98-102.	
DED		Thomas Thurn-Albrecht, et al., "Nanoscale Templates from Oriented Block Copolymer Films," Advanced Materials, Vol. 12, No. 11, 2000, pp. 787-791.	
DED		Augustine Urbas, et al., "Tunable Block Copolymer/Homopolymer Photonic Crystals," Advanced Materials, Vol. 12, No. 11, pp. 812-814.	
DED		Didier Benoit, et al., "One-Step Formation of Functionalized Block Copolymers," Macromolecules, Vol. 33, 2000, published on web 2/12/00, pp. 1505-1507.	
DED		Richard D. Peters, et al., "Using Self-Assembled Monolayers Exposed to X-Rays to Control the Wetting Behavior of Thin Films of Diblock Copolymers," Langmuir, Vol. 16, 2000, published on web 4/7/00, pp. 4625-4631.	
DED		V.Y. Banine, et al., "Comparison of Extreme Ultraviolet Sources for Lithography Applications," Microelectronic Engineering, Vol. 53, 2000, pp. 681-684.	
DED		Qiang Wang, et al., "Symmetric Diblock Copolymer Thin Films Confined Between Homogeneous and Patterned Surfaces: Simulations and Theory," J. of Chemical Physics, Vol. 112, No. 22, 8 June 2000, pp. 9996-10010.	

Form PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 032026-0601	SERIAL NO. 10/800,923
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
DD		Jakob Heier, et al., "Kinetics of Individual Block Copolymer Island Formation and Disappearance Near an Absorbing Boundary," Macromolecules, Vol. 33, 2000, published on web 7/12/00, pp. 6060-6067.			
DD		Yachin Cohen, et al., "Deformation of Oriented Lamellar Block Copolymer Films," Macromolecules, Vol. 33, 2000, published on web 8/5/00, pp. 6502-6516.			
DD		M. Switkes, et al., "Patterning of Sub-50 nm Dense Features with Space-Invariant 157 nm Interference Lithography," Applied Physics Letters, Vol. 77, No. 20, 13 November 2000, pp. 3149-3151.			
DD		Tae K. Kim, et al., "Chemical Modification of Self-Assembled Monolayers by Exposure to Soft X-Rays in Air," J. Phys. Chem. B, Vol. 104, 2000, published on web, 7/18/00, pp. 7403-7410.			
DD		Richard D. Peters, et al., "Combining Advanced Lithographic Techniques and Self-Assembly of Thin Films of Diblock Copolymers to Produce Templates for Nanofabrication," J. Vac. Sci. Technol. B, Vol. 18, No. 6, Nov./Dec., 2000, pp. 1-5.			
DD		T. Thum-Albrecht, et al., "Ultrahigh-Density Nanowire Arrays Grown in Self-Assembled Diblock Copolymer Templates," Science, Vol. 290, No. 5499, 15 December 2000, pp. 2126-2129.			
DD		Xiao M. Yang, et al., "Guided Self-Assembly of Symmetric Diblock Copolymer Films on Chemically Nanopatterned Substrates," Macromolecules, Vol. 33, 2000, published on web 12/26/00, pp. 9575-9582.			
DD		Alexander C. Edrington, et al., "Polymer-Based Photonic Crystals," Advanced Materials, Vol. 13, No. 6, March 16, 2001, pp. 421-425.			
DD		C.T. Black, et al., "Integration of Self-Assembled Diblock Copolymers for Semiconductor Capacitor Fabrication," Applied Physics Letters, Vol. 79, No. 3, 16 July 2001, pp. 409-411.			
DD		A. Yen, et al., "Achromatic Holographic Configuration for 100-nm-Period Lithography," Applied Optics, Vol. 31, No. 22, August 1, 1992, pp. 4540-4545.			
DD		H.H. Solak, et al., "Exposure of 38 nm Period Gratings Patterns with Extreme Ultraviolet Interferometric Lithography," Applied Physics Letters, Vol. 75, 1999, pp. 2328-2330.			

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PD		Yang, X. M. et al., "Patterning of self-assembled monolayers with lateral dimensions of 0.15 μ m using advanced lithography," <i>J. Vac. Sci. Technol. B</i> , 17(6), Nov/Dec 1999, pp. 3203-3207; published by American Vacuum Society.	
PD		Peters, R. D. et al., "Combining advanced lithographic techniques and self-assembly of thin films of diblock copolymers to produce templates for nanofabrication," <i>J. Vac. Sci. Technol. B</i> , 18(6), Nov/Dec 2000, pp. 3530-3534; published by American Vacuum Society.	
PD		Yang, X. M. et al., "Proximity X-ray Lithography Using Self-Assembled Alkylsiloxane Films: Resolution and Pattern Transfer," <i>Langmuir</i> , 2001, 17, pp. 228-233; published by American Chemical Society.	
PD		Wang, Q. et al., "Monte Carlo simulations of diblock copolymer thin films confined between two homogeneous surfaces," <i>Journal of Chemical Physics</i> , 112(1), 1 January 2000; published by American Institute of Physics.	
PD		Wang, Q. et al., "Monte Carlo Simulations of Diblock Copolymer Thin Films Confined between Chemically Heterogeneous Hard Surfaces," <i>Macromolecules</i> , 2000, 33, pp. 4512-4525; published by American Chemical Society.	
PD		Wang, Q. et al., "Monte Carlo Simulations of Asymmetric Diblock Copolymer Thin Films Confined between Two Homogeneous Surfaces," <i>Macromolecules</i> , 2001, 34, pp. 3458-3470; published by American Chemical Society.	
PD		Nath, S. K. et al., "Density functional theory of molecular structure for thin diblock copolymer films on chemically heterogeneous surfaces," <i>Journal of Chemical Physics</i> , 110(15), 15 April 1999; published by American Institute of Physics.	
PD		Solak, H. H. et al., "EUV Interferometric Lithography for Resist Characterization," SPIE, Vol. 3676, Santa Clara, California, March 1999.	